

e. **Summary**

[0078] Limited treatment of *lal*^{-/-} mice with LAL (10 injections in 30 days, 1.48 U/dose) led to gross, histologic and biochemical corrections of cholesterol and triglyceride levels in treated mice.

2. Plasma chemistries and lipid levels in *lal*^{-/-} and *ldlr*^{-/-} mice.

[0079] No differences in plasma glucose levels were observed in treated or untreated *lal*^{-/-} or *ldlr*^{-/-} mice although *ldlr*^{-/-} mice have higher plasma glucose levels than wild type or *lal*^{-/-} mice. The *lal*^{-/-} and *ldlr*^{-/-} mice had increased plasma non-esterified fatty acids (NEFA) levels compared to the wild-type controls (162% and 227%, respectively). LAL administration was associated with increases of the NEFA by 32.6% in *lal*^{-/-} mice and 24.5% in *ldlr*^{-/-} mice. Plasma triglycerides levels decreased in treated *lal*^{-/-} mice, but were unchanged in *ldlr*^{-/-} mice. The HFCD produced hypercholesterolemia in *ldlr*^{-/-} mice. The plasma free cholesterol concentration increased 22-fold and plasma cholesteryl ester concentration increased 13.8-fold compared to wild-type mice. The LAL treated *ldlr*^{-/-} mice had decreases in plasma free cholesterol of 18.2% (p=0.0894) and in cholesteryl esters of 26.7% (P=0.0025). The free cholesterol and cholesterol ester levels were unchanged in treated *lal*^{-/-} mice.